

Abstract for 42<sup>nd</sup> International Conference on Environmental Systems

**Title:** Shuttle/ISS EMU Failure History and the Impact on Advanced EMU PLSS Design

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**Abstract:**

As the Shuttle/ISS EMU Program exceeds 30 years in duration and is still successfully supporting the needs of the International Space Station (ISS), a critical benefit of such a long running program with thorough documentation of system and component failures is the ability to study and learn from those failures when considering the design of the next generation space suit. Study of the subject failure history leads to changes in the Advanced EMU Portable Life Support System (PLSS) schematic, selected component technologies, as well as the planned manner of ground testing. This paper reviews the Shuttle/ISS EMU failure history and discusses the implications to the AEMU PLSS.